

REMARKS

In response to the Office Action mailed on July 26, 2006, Applicants respectfully request reconsideration. Claims 1-7 and 10-17 were previously pending in this application. By this amendment, Applicants have amended claims 1 and 10. As a result, claims 1-7 and 10-17 are pending for examination with claims 1, 10 and 11 being independent. No new matter has been added.

Interview Summary

Applicants thank Examiner Britt for the courtesies extended in suggesting and conducting a telephone interview on October 10, 2006. The rejections raised in the Office Action of July 26, 2006 were discussed. The claims as pending and the Schinabeck et al. and Miura references were discussed.

During the telephone interview, Applicants' representatives pointed out that previously added claims 11-17 and original claims 1-10 both relate to testing devices that can produce outputs out of a defined order. The Examiner suggested that Applicants traverse the restriction requirement as to claims 11-17, with the expectation that the restriction requirement would be withdrawn.

Rejections Under 35 U.S.C. §102

Claims 1 and 10 were rejected under 35 U.S.C. §102 as being anticipated by Schinabeck et al. (U.S. Patent No. 4,646,299), hereinafter Schinabeck. These rejections are respectfully traversed.

Claim 1 relates to testing semiconductor devices that output nondeterministic entity information, which can results in the actual output entities appearing out of order relative to expected output entities. Claim 1 relates to testing a device in which actual output entities and expected output entities are "ordered to create a correspondence between the actual output entities and the expected output entities." A fail condition may be indicated "where a comparison fails to match an actual output entity to a corresponding expected output entity."

However, such a condition may not necessarily indicate a defect of the semiconductor device. It could, instead, indicate that the actual output entity is out of order. Accordingly, the

claim further recites: “if a failed actual output entity is identified in the comparing step, defining a window of valid expected entities relative to the corresponding expected output entity and comparing the failed actual output entity to expected output entities in the window of valid expected entities.”

The references do not show or suggest such a method meeting all limitations of claim 1. Schinabeck does not relate to nondeterministic device testing and therefore does not describe a method as claimed. Rather, the reference describes an automated test system in which a “pass window” may be defined. Unlike the “window of valid expected entities, relative to the corresponding expected output entity,” of the claim, the “pass window” of Schinabeck relates to a range of allowed values that a signal may have when measured. At column 18, starting at line 13, Schinabeck describes how the pass window current limits are defined. These limits apply to a single signal and not to expected entities in a window.

Therefore, Schinabeck neither discloses nor suggests all limitations of claim 1. Accordingly, the rejection of claim 1 should be withdrawn. Claims 2-7 depend from claim 1 and therefore should be in allowable condition for at least the same reasons.

Claim 10 recites a computer-readable medium implementing the method of claim 1. Therefore, the rejection of claim 10 should also be withdrawn.

Rejections Under 35 U.S.C. §103

The Examiner rejected claims 1, 2 and 10 under 35 U.S.C. §103(a) as being unpatentable over Miura (U.S. Patent No. 6,789,224) in view of Rivoir (U.S. Publication No. 2002/0188888 A1). Applicants respectfully traverse these rejections. Even if Miura and Rivoir were combined, the combination would not meet the limitations of the claims.

As noted by the Examiner, Miura does not disclose “defining a window of valid expected entities” if a failure is identified and “comparing the failed actual output entity to the window.” Rivoir does not teach or suggest adding such a limitation to the system of Miura.

Rivoir describes representing both an actual output signal and an expected output signal by a sequence of time stamps. However, Rivoir does not mention the possibility that the signals giving rise to the time stamps may occur out of an expected order. Nor does Rivoir otherwise teach or

suggest “defining a window of valid expected entities relative to the corresponding expected output entity and comparing the failed actual output entity to expected output entities in the window of valid expected entities,” as recited in claim 1. Accordingly, even if Miura and Rivoir were combined, the combination would not teach or suggest every limitation of claim 1, and the rejection under 35 U.S.C. §103 should be withdrawn.

Accordingly, claims 1 and 10 are now in allowable condition. Claims 2-7 depend from claim 1 and are allowable for at least the same reasons.

Restriction Requirement

The Examiner has indicated that claims 11-17 are withdrawn from consideration because they are directed to an invention distinct from that originally claimed. The basis of the restriction is that the focus of newly added claims 11-17 is “more on the sequencing and order of the output data.” During the telephone interview, Applicants representatives pointed out the original claims 1-10 also relate to ordering of output data. For example, claims 1 and 10 recited two comparing steps. In the first, an actual output entity that differs from a corresponding expected output entity is identified. However, in the second comparing step, that actual output entity is compared to expected output entities in a window of valid expected entities relative to the corresponding expected entity. With these steps, a test process may be created that accommodates deviations in the order of the actual output entities.

The amendments to claims 1 and 10 are not intended to change the scope of the claims. Rather, they make clear the relationship between the claims 1 and 10, on the one hand, and claim 11 on the other. As can be seen, these claims are related closely enough in subject matter that they should be examined together. Accordingly, withdrawal of the restriction requirement is respectfully requested.

CONCLUSION

In view of the above amendment, Applicants believe the pending application is in condition for allowance. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

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Respectfully submitted,


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